

D1 U.S. Patent 5,958,348, entitled "Efficient Production of Particles by Chemical Reaction," filed on February 28, 1997, incorporated herein by reference. Alternative and complimentary embodiments are described herein.

---

At page 15, lines 11-25, please replace the paragraph with the following:

---

D2 Improved aerosol delivery apparatuses for reactant systems are described further in copending and commonly assigned U.S. Patent Application Serial Number 09/188,670 to Gardner et al. now U.S. Patent 6,193,936, entitled "Reactant Delivery Apparatuses," incorporated herein by reference. These aerosol delivery systems can be adapted for use in reaction systems not involving laser pyrolysis. Approaches are also described therein for the adaptation of aerosol delivery by a variety of approaches with a reaction chamber elongated in one dimension in the plane perpendicular to a reactant stream. Some of these approaches include, for example, using an elongated nozzle opening, placing columns of gas jets adjacent the aerosol nozzle, employing a plurality of aerosol nozzles and applying a combination thereof.

---

At page 19, line 33 to page 20, line 21, please replace the paragraph with the following:

---

D3 Referring to Fig. 3, an alternative embodiment of reactant delivery apparatus 102 is shown for delivery of two aerosol reactants. Aerosol generators 146, 148 deliver aerosol into delivery tubes 150, 152, respectively. Delivery tubes 150, 152 deliver reactants to two openings 154, 156, respectively. Aerosol generators 146, 148 can operate based on a variety of principles. For example, the aerosol can be produced with an ultrasonic nozzle, with an electrostatic spray system, with a pressure-flow or simplex atomizer, with an effervescent atomizer or with a gas atomizer where liquid is forced under significant pressure through a small orifice and fractured into particles by a colliding gas stream. Suitable ultrasonic nozzles can include piezoelectric transducers. Ultrasonic nozzles with piezoelectric transducers and suitable broadband ultrasonic

D3 generators are available from Sono-Tek Corporation, Milton, NY, such as model 8700-120. Suitable aerosol generators are described further in copending and commonly assigned, U.S. Patent Application Serial No. 09/188,670 to Gardner et al. now U.S. Patent 6,193,936, entitled "Reactant Delivery Apparatuses," incorporated herein by reference.

---

In the Claims

Please substitute the following amended claims for those currently pending:

- D4
20. (Amended) A particle production system comprising:  
a plurality of reactant inlets configured to direct a plurality of independent reactant streams toward one or more product outlets; and  
a particle collection apparatus connected to the one or more product outlets to collect the product particles generated by the reactants from the plurality of reactant inlets.

---

Please add the following new claims:

- D5
63. (New) The particle production apparatus of claim 20 wherein a radiation pathway intersects each of the independent reactant streams.
64. (New) The particle production apparatus of claim 20 wherein a single radiation pathway intersects the plurality of independent reactant streams.

---

REMARKS

Claims 20-27 and 52-65 are pending. By this Amendment, claim 20 is amended, and new claims 63-64 are added. The specification is amended to update references to